REMARKS

Claims 1 and 69 have been amended to clarify the subject matter regarded as the invention. Claims 1-3, 5-11, 69-71, 75-78 remain pending.

The Examiner has rejected claims 1-3 and 5-11 under 35 U.S.C. §102.

The rejection is respectfully traversed. With respect to claim 1, the Examiner stated that Takemoto et al. disclosed "...a position detection system for locating an object including a magnetic field generator, comprising: an array of parallel conductors responsive to a magnetic field generated by the magnetic field generator; a plurality of receivers each associated with a parallel conductor; and a plurality of drivers each coupled with a parallel conductor and configured to drive current through to produce an energized field used in locating the object." (page 2, Office Action). Claim 1, as amended herein, recites "... a plurality of drivers *using a sinusoidally-varying, multi-phase driving technique,* each of the plurality of drivers coupled with a parallel conductor and configured to drive current through to produce an energizing field used in locating the object." (emphasis added). In contrast to Takemoto et al., the claimed invention employs a sinusoidally-varying, multi-phase driving technique which, when read in light of the specification, produces a current profile resulting from sinusoidally-varied or weighted voltages. This is patentably distinct from Takemoto et al. which specifically states that "[A] continuous sine wave with 0V as the center having frequency 1 MHz is preferred, for example, as shown in FIG. 8, as a voltage waveform 81 fed to the transmission line 22." (Column 6, lines 64-67; FIG. 8). Further, "[S]ince the voltage waveform 81 to the transmission line 22 is a continuous sine wave with 0V as the center, noise, as with a square wave, does not occur and the effect on other devices such as the main controller 30 can be prevented." (Column 8, lines 55-58). Applicants submit there is no sinusoidal variance or multi-phase driving technique disclosed in Takemoto et al. As Takemoto et al. does not recite the claimed sinusoidally-varied or multi-phase driving

technique, claim 1 is not anticipated. Thus, Applicants submit that claim 1, as amended, is allowable.

Claims 2, 3, and 5-11 depend from claim 1 and are believed to be allowable for the same reasons described above.

The Examiner has rejected claims 5-9 under 35 U.S.C. §103.

Claims 5-9 were rejected as being obvious under Takemoto et al. However, reasons similar to those for claim 1, dependent claims 5-9 are also allowable. Specifically, Takemoto et al. fails to disclose each and every aspect of the claimed invention in claims 5-9, which depend from claim 1. *See* MPEP 706.02(j). Thus, claims 5-9 are not obvious and are therefore allowable.

The Examiner has also rejected claims 69-71 and 75-78 under 35 U.S.C. §103.

The rejection is respectfully traversed. Claim 69 has been amended to similarly reflect that the claimed method for detecting the position of an object uses a sinusoidally varying, multi-phase driving technique, which is disclosed by neither Takemoto et al., as discussed above, nor Dames et al. In Dame et al., conductive forward and return paths are "...in antiphase, i.e., they are substantially 180° out of phase." (*See* col. 6, lines 44-45). Dames et al. does not disclose the claimed multiphase technique. Applicants' specification provides explicit interpretative explanations as to the difference between Dames et al. and the claimed multi-phase driving technique. Claim 69 is not obvious over Takemoto et al. in view of Dames et al. Thus, Applicants submit that claim 69, as amended, is in condition for allowance.

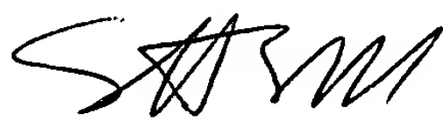
Claims 70, 71, 75-78 directly or indirectly depend from claim 69 and are believed to be allowable for the same reasons described above.

Additionally, the Examiner rejected claims 10-11 under 35 U.S.C. §103. Applicants submit, however, that these claims are allowable for similar reasons as those set forth above for claims 69-71 and 75-78.

Amendments to the claims are shown in the current amendment with additions underlined and deletions struck through. The current amendment is submitted under the revised format now permitted under the guidelines published in USPTO Official Gazette 1267 OG 106 (February 25, 2003).

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,



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